

WHAT IS CLAIMED IS:

1           1. A radio frequency power supply structure for use in a  
2 device generating plasma by charging a plate-like electrode with a  
3 radio frequency power, said radio frequency power supply  
4 structure supplying said electrode with the radio frequency power  
5 from an RF cable, wherein said RF cable is positioned on an  
6 extended plane of a plane formed by said electrode to connect to  
7 said electrode at a connecting portion provided on an end  
8 peripheral portion of said electrode.

1           2. A radio frequency power supply structure as claimed in  
2 Claim 1, wherein the end peripheral portion of said electrode where  
3 said connecting portion is provided forms a right angle to said RF  
4 cable on said plane formed by said electrode at said connecting  
5 portion.

1           3. A radio frequency power supply structure as claimed in  
2 Claim 1 or 2, wherein said electrode forms a longitudinal grid plate  
3 shape having two lateral electrodes forming two mutually opposed  
4 end peripheral portions of said electrode and a plurality of  
5 longitudinal electrodes arranged between said two lateral electrodes  
6 so as to connect to said two lateral electrodes.

1           4. A radio frequency power supply structure as claimed in  
2 Claim 3, wherein said RF cable is directed in parallel with said  
3 plurality of longitudinal electrodes to connect to said electrode at  
4 said connecting portion.

1           5. A radio frequency power supply structure as claimed in  
2 Claim 4, wherein said RF cable directly connects to one of said  
3 plurality of longitudinal electrodes at said connecting portion.

1           6. A radio frequency power supply structure as claimed in  
2 any one of Claims 1 to 5, wherein a core cable of said RF cable  
3 connects to said electrode so as to form a smoothly curved  
4 continuous surface at said connecting portion.

1           7. A radio frequency power supply structure as claimed in  
2 any one of Claims 1 to 5, wherein an outer shell, functioning as  
3 earth, of said RF cable has its front end elongated to the position of  
4 said electrode at said connecting portion to form an elongated  
5 portion that covers said connecting portion.

1           8. A plasma CVD device comprising a radio frequency  
2 power supply structure as claimed in any one of Claims 1 to 7.